To: Peter Israelsson[pisraelsson@anchorqea.com]; Peter Oates[poates@anchorqea.com]
Cc: Garland, Edward[Edward.Garland@hdrinc.com]; Vaughn, Stephanie[Vaughn.Stephanie@epa.gov]; Kirchner, Scott[KirchnerSF@cdmsmith.com]
From: Wands, James
Sent: Wed 1/21/2015 4:56:07 PM
Subject: Particle mixing rate question
plot_pmix.pdf

Peter, Pete,

I am looking at the particle mixing in the contaminant model runs that we received in December. I see that you have implemented 3D particle mixing rates in the bed and the implementation in the code appears to work correctly. I had a question about the input parameterization for the mixing rate. Looking at the inputs it appears there are two distinct profiles for vertical mixing in the model runs we are looking at. Both are identical below 2 cm. One has the highest mixing at the surface and the other has zero mixing at the surface. In the attached figure there is a map on the left with model grid cells colored either red or blue, the center panel has the mixing rate plotted verses depth on an arithmetic scale, and the panel on the right is the same information repeated on a log scale axis. The color on the map indicates the profile used at that location. The red cells are locations where there is no mixing in the top 2 centimeters. You will have to zoom in to see some areas.

Is there a justification for zero mixing at the surface in the red cells, or is this potentially a mistake in the input deck?

Thanks,

James

James Wands, P.E.

Senior Water Quality Modeler

Professional Associate

Please note new address and phone number

HDR

1 International Boulevard

10th Floor, Suite 1000
Mahwah, NJ 07495
T 201.335.9300 **D** 201.335.9442
James.Wands@hdrinc.com

hdrinc.com/follow-us